

# REDSTONE GATEWAY

PACKAGE 1 F- REDSTONE GATEWAY EXTENSION, MARKET STREET, AND OVERLOOK ROAD RELOCATION (UNSECURE AREA)

> FOR THE CITY OF HUNTSVILLE HUNTSVILLE, ALABAMA

> > BID SET



LBYD, INC. PROJECT NO. 302-10-002A CITY OF HUNTSVILLE PROJECT NO. 65-11-SP22

**SEPTEMBER 15, 2011** 

DRAWING INDEX

C6.1

C6.2

C7.0

C7.1

C7.2

C7.3

C7.4

C7.5

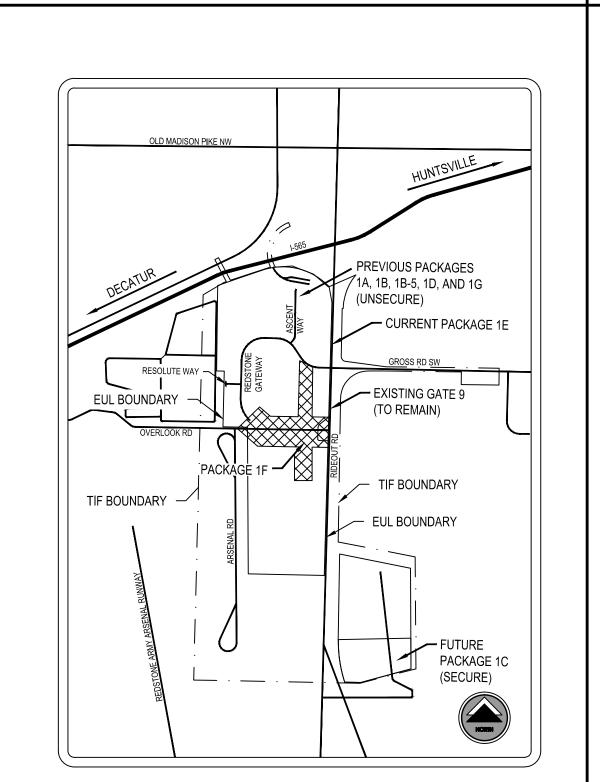
C8.0

C8.1

GRADING PLAN

OVERALL GRADING PLAN

FOR PLOTTING PURPOSES **GRAY SHADES ARE PRESENT** 24" X 36" FULL SIZE SHEETS



**LOCATION MAP** 

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PROJECT TEAM

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GEOTECHNICAL ENGINEER: **BUILDING AND EARTH SCIENCES** 2607 LEEMAN FERRY ROAD, SUITE 5 HUNTSVILLE, AL 35801 MAIN: (256) 713-0056 CONTACT: DON BROWN, PE PHONE: (205) 836-6300 EMAIL: DBROWN@BUILDINGANDEARTH.COM

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AHA ENGINEERS 1801 OLD ALABAMA ROAD SUITE 125 ROSWELL, GA 30076 CONTACT: JIM MCMULLEN PHONE: (770) 992-8585 EMAIL: MCMULLENJ@AHA-ENGINEERS.COM ELECTRICAL ENGINEER 101 CHURCH STREET SUITE 201

# HUNTSVILLE, AL 35801 CONTACT: LARRY CREECH PHONE: (256) 551-0222 EMAIL: LARRY CREECH@TETRATECH.COM

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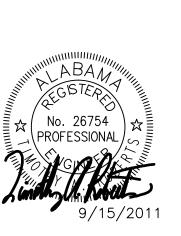
OVERLOOK ROAD CROSS SECTIONS (STA 5+00 TO STA 9+50)

OVERLOOK ROAD CROSS SECTIONS (STA 10+00 TO STA 14+50)

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C14.9	DETAILS
C14.10	DETAILS
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LP-5	PLANTING DETAILS
LP-6	PLANTING NOTES
E0.1	LEGENDS, NOTES, AND SYMBOLS
E4.0	ELECTRICAL CITE DI ANI









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THE OWNER.

- 1. LBYD, INC. SHALL NOT HAVE AUTHORITY OVER THE SITE CONTRACTOR'S WORK OR RESPONSIBILITIES. LBYD IS NOT RESPONSIBLE FOR SITE SAFETY PROCEDURES OR METHODS OF CONSTRUCTION. IT IS NOT LBYD'S DUTY TO REVIEW THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN OR NEAR THE CONSTRUCTION SITE.
- ALL EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND OTHER UTILITIES MAY EXIST. CONTRACTOR MUST HAVE EXISTING UTILITIES LOCATED BY UNDERGROUND LINE LOCATORS AS WELL AS FIELD VERIFIED BY ONSITE PERSONNEL BY "POT HOLING" THE UTILITY WITH POST HOLE DIGGERS PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER IMMEDIATELY.
- 3. EXISTING UTILITIES TO REMAIN MAY BE LOCATED WITHIN PROPOSED DEMOLITION AREAS, CONTRACTOR SHALL USE EXTREME CAUTION WHILE WORKING IN THESE AREAS TO ENSURE NO UTILITY SERVICE INTERRUPTIONS TO FACILITIES THAT REMAIN OR TO
- 4. ALL EXISTING IMPROVEMENTS WITHIN THE LIMITS OF CONSTRUCTION ARE TO REMAIN UNLESS SPECIFICALLY NOTED, "TO BE
- 5. CONTRACTOR SHALL COORDINATE WITH OWNER AND THE UTILITY PROVIDER PRIOR TO THE DISCONNECTING OR REMOVAL OF ANY UTILITY SERVICE. ALL UTILITIES TO BE REMOVED ARE TO BE CAPPED OR PLUGGED OR TERMINATED ACCORDING TO THE UTILITY OWNERS REQUIREMENTS.
- 6. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ADJACENT PROPERTIES AND IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING IMPROVEMENTS ON OR OFF SITE DUE TO THE CONSTRUCTION OF THIS PROJECT. ANY DAMAGE WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 7. WHEN CAVES OR SOLUTION CAVITIES ARE DISCOVERED DURING CONSTRUCTION, WORK SHALL STOP IN THE AREA PENDING FURTHER BIOLOGICAL AND GEOTECHNICAL INVESTIGATIONS.
- 8. IF DURING CONSTRUCTION THE CONTRACTOR OBSERVES HISTORIC OR ARCHAEOLOGICAL RESOURCES, THEN SUCH OBSERVATIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER. THE CONTRACTOR SHALL CEASE ALL ACTIVITIES IN THE AREA THAT MAY RESULT IN THE DESTRUCTION OF THESE RESOURCES AND SHALL PREVENT EMPLOYEES FROM TRESPASSING ON, REMOVING,
- OR OTHERWISE DAMAGING SUCH RESOURCES UNTIL RELEASED BY THE OWNER. 9. MILITARY MUNITIONS - BASED ON THE ENVIRONMENTAL ASSESSMENT THE EUL SITE HAS NOT BEEN IDENTIFIED AS HAVING THE POTENTIAL OF UNEXPLODED ORDINANCE (UXO). IN THE EVENT THAT THE CONTRACTOR DISCOVERS OR UNCOVERS MILITARY MUNITIONS AS DEFINED IN 40 CFR 260, HAZARDOUS WASTE MANAGEMENT SYSTEM HE SHALL STOP WORK IN THAT AREA AND NOTIFY
- 10. STORMWATER IMPACTS SHALL BE MINIMIZED DURING CONSTRUCTION WITH APPROPRIATE BMP MEASURES PER THE ALABAMA HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL AND STORMWATER MANAGEMENT ON CONSTRUCTION SITES AND URBAN AREAS. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING AND IMPLEMENTING A PLAN FOR SECONDARY CONTAINMENT OF STORED FUEL, DRIP PANS UNDER GENERATORS AND STATIONARY VEHICLES, AND MAINTAINING SPILL MITIGATION KITS ON-SITE DURING CONSTRUCTION.
- 11. WASTE MATERIALS SHALL BE RECYCLED TO THE MAXIMUM EXTENT FEASIBLE.
- 12. FENCE REMOVAL AND INSTALLATION OPERATIONS SHALL BE ACCOMPLISHED SO THAT THE PERIMETER SECURITY OF THE EXISTING FACILITIES SHALL BE MAINTAINED AT ALL TIMES MEETING ANTI-TERRORISM/FORCE PROTECTION (AT/FP) REQUIREMENTS. 13. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION. NOTE THAT NOT ALL SECTIONS OF THE CITY
- SPECIFICATIONS WILL APPLY TO THIS PROJECT. 14. CONCRETE SHALL BE 3,000 PSI 28 DAY STRENGTH UNLESS OTHERWISE NOTED ON THE PLANS.
- 15. EXISTING ROADWAYS SHALL BE KEPT FREE OF MUD, SEDIMENT, DEBRIS, ETC. AND SHALL BE CLEANED ON A REGULAR BASIS AS A
- 16. THE CONTRACTOR SHALL BE RESPONSIBLE TO ADHERE TO THE REQUIREMENTS OF THE ENVIRONMENTAL ASSESSMENT FOR THE NORTH RIDEOUT ROAD ENHANCED USE LEASE SITE DEVELOPMENT AT REDSTONE ARSENAL, AL DATED DECEMBER 2008.
- 17. SITE WORK IS CURRENTLY ONGOING AT THE SITE AND THE INFORMATION SHOWN ON SHEETS C2.0 THRU C2.7 REFLECTS THE FINISHED CONDITION OF PACKAGE 1A - MASS GRADING AND EROSION CONTROL PACKAGE (UNSECURE AREA) DATED DECEMBER 16, 2010, PACKAGE 1B - ROADWAY AND UTILITIES (UNSECURE AREA) DATED APRIL 12, 2011, PACKAGE 1B-5 - GRAVITY SANITARY SEWER DATED APRIL 12, 2011, PACKAGE 1D - RAILROAD SPUR RELOCATION /INSTALLATION DATED MAY 13, 2011, AND PACKAGE 1G - LANDSCAPE, IRRIGATION, AND HARDSCAPE DATED JULY 7, 2011. THE ELEVATIONS SHOWN ON THESE PLANS ARE TO FINISHED GRADE ELEVATION. THE PACKAGE 1F CONTRACTOR SHALL REVIEW THE PACKAGE 1A, 1B, 1B-5, AND 1D PLANS AND SPECIFICATIONS TO MAKE THEMSELVES FAMILIAR WITH THE PHASING OF PACKAGES 1A, 1B, 1B-5, AND 1D AND HOW IT WILL IMPACT THEIR PACKAGE 1F SCOPE AND SCHEDULING OF WORK. FURTHER NOTE THAT BUILDING RG1000 IS CURRENTLY UNDER CONSTRUCTION WITH BUILDING RG1200, BUILDING RG7200, RETAIL PROJECTS, AND PACKAGE 1E ANTICIPATED TO START DURING PACKAGE 1F CONSTRUCTION. PACKAGE 1F WORK WILL HAVE TO COORDINATE DELIVERIES AND ACCESS WITH ALL OF THE ABOVE MENTIONED PROJECTS.

#### SITE DEMOLITION NOTES

- CONTRACTOR TO COORDINATE DEMOLITION ITEMS NOTED ON THE DRAWINGS TO BE SALVAGED, RECYCLED, AND REUSED. CONTRACTOR SHALL REMOVE THE CONCRETE AND STEEL ELECTRICAL POLES TO BE SALVAGED WITH EXTREME CAUTION TO PREVENT DAMAGE AND STOCKPILE THEM IN AREA NOTED ON THE PLANS.
- 2. REFER TO SITE GRADING, DRAINAGE, AND UTILITY PLANS FOR PROPOSED UTILITY AND DRAINAGE INSTALLATION AND REMOVA 3. REFER TO LAYOUT, GRADING, AND UTILITY PLANS FOR ADDITIONAL INFORMATION RELATING TO PAVING, CURB, SIDEWALKS, ETC. REMOVE EXISTING CURBS AS NEEDED TO INSTALL PROPOSED IMPROVEMENTS.
- 4. CONTRACTOR SHALL COORDINATE WITH CITY OF HUNTSVILLE (OWNER), REDSTONE ARSENAL, LBYD, THE PROJECT MANAGER, AND THE UTILITY PROVIDER PRIOR TO THE DISCONNECTING OF ANY UTILITY SERVICE.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, RELOCATION OR PROTECTION OF ALL ABOVE AND BELOW GROUND EXISTING IMPROVEMENTS THAT ARE IN CONFLICT WITH THE PROPOSED IMPROVEMENTS UNLESS NOTED TO BE RELOCATED BY THE UTILITY SERVICE PROVIDER.
- 6. ALL DEMOLITION AND CONSTRUCTION DEBRIS SHALL BE RECYCLED TO THE MAXIMUM EXTENT FEASIBLE. REMAINING WASTE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE TRANSPORTED AND DISPOSED OF OFF-SITE AS REQUIRED IN A LEGAL MANNER WHILE KEEPING THE SITE CLEAN AND ORDERLY.
- 7. ALL EXISTING PAVING, CURBS, HARDSCAPE, ETC. SHALL BE SAW CUT AT THE LIMITS OF REMOVAL IN ORDER TO PROVIDE A CLEAN EDGE. EXISTING PAVING AT EDGE SHALL BE MILLED BACK A MINIMUM OF 8" TO ENSURE SMOOTH TRANSITION.
- 8. ALL EXISTING TREES TO REMAIN OUTSIDE OF THE CLEARING LIMITS SHALL BE PROTECTED DURING CONSTRUCTION. 9. BACKFILLING OF DEMOLISHED ITEMS SHALL BE SUITABLE FILL OR STONE PER THE PROJECT SPECIFICATIONS SUPPLEMENTAL SPECIFICATIONS EARTHWORK.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND PUMPING AS NECESSARY FOR EROSION CONTROL FOR OWN SCOPE OF WORK.

## LAYOUT NOTES:

- 1. CONTRACTOR SHALL VERIFY SITE BOUNDARY AND EXISTING TOPOGRAPHY. NOTIFY THE OWNER OF ANY DISCREPANCIES PRIOR TO SUBMITTING PRICES OR ORDERING MATERIALS
- 2. THE OWNER WILL BE RESPONSIBLE FOR PROVIDING BENCHMARKS, CONTROLS, AND FINAL ELECTRONIC AS-BUILT DRAWINGS. 3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL BENCHMARKS, PROPERTY CORNERS, AND ALDOT MONUMENTATION. ANY REPLACEMENT WILL BE AT THE CONTRACTOR'S EXPENSE.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND A "RED-LINED" SET OF CLEAN CONSTRUCTION DOCUMENTS TO SERVE AS THE CONTRACTOR'S AS-BUILTS FOR OWN SCOPE OF WORK.
- 5. ALL DIMENSIONS AND COORDINATES SHOWN ARE TO THE BACK OF CURB OR TO THE EDGE OF SURFACING UNLESS OTHERWISE NOTED. DEWATERING.
- ALL TEMPORARY STRIPING TO BE PER THE LATEST EDITION OF THE MUTCD UNLESS NOTED OTHERWISE. ALL PERMANENT STRIPING SHALL BE THERMOPLASTIC PER CITY OF HUNTSVILLE STANDARDS SPECIFICATION SECTION 701.
- 8. BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY THE OWNER AND PERFORMED BY BUSBIN ENGINEERING.
- 9. TOPOGRAPHIC INFORMATION WAS PERFORMED VIA GROUND RUN AND AERIAL FORMAT AND TAKEN FROM PREVIOUS DESIGN PLANS FOR NEC COMMUNICATIONS NOTES
- PACKAGE 1A DATED DECEMBER 16, 2010 AND PACKAGE 1B DATED APRIL 12, 2011.

## REDSTONE TRANSMISSION LINE NOTES:

- 1. THE CONTRACTOR SHALL NOTIFY REDSTONE ARSENAL, JERRY ROBINSON (256) 876-3122, AT LEAST 48 HOURS IN ADVANCE OF WORK NEAR REDSTONE TRANSMISSION LINES.
- 2. A CONDUCTOR TO GROUND CLEARANCE OF 24 FEET MUST BE MAINTAINED ON ALL FILLS. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE TO REDSTONE PROPERTY AND/OR ELECTRICAL OUTAGES CAUSED BY THEIR WORK.
- 3. THE CONTRACTOR SHALL TAKE MEASURES TO ENSURE SAFETY OF THEIR WORKERS WHEN WORKING IN OR AROUND THE HIGH VOLTAGE TRANSMISSION LINES. THIS WORK SHALL BE PER STATE LAWS AND OSHA REQUIREMENTS FOR WORK NEAR ENERGIZED TRANSMISSION LINES.
- 4. ANY COUNTERPOISE THAT IS UNCOVERED OR DAMAGED SHALL BE REPAIRED/REBURIED IMMEDIATELY BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
- 5. REDSTONE HAS THE RIGHT FOR INGRESS AND EGRESS THROUGH THE CONSTRUCTION SITE FOR MAINTENANCE ON THEIR LINES. THE CONTRACTOR SHALL WORK WITH REDSTONE TO ENSURE ACCESS TO THEIR FACILITIES.

#### TRAFFIC CONTROL NOTES

- 1. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE LATEST EDITION AND REVISION OF PART VI OF THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE APPROVED TRAFFIC CONTROL PLAN FOR ALL CONSTRUCTION WITHIN WORK AREAS SHOWN AND DESCRIBED IN PART VI OF THE MUTCD. 2. ACCESS TO THE VISITOR'S CENTER SHALL BE MAINTAINED AT ALL TIMES AND SHALL MEET THE REQUIREMENTS OF REDSTONE ARSENAL.
- 3. TRAFFIC CONTROL AND ACCESS SHALL TAKE INTO CONSIDERATION BASE SECURITY MEASURES. 4. PERMANENT ROADWAY SIGNS OR TEMPORARY CONSTRUCTION SIGNS WHICH ARE NOT APPLICABLE OR INAPPROPRIATE FOR THE
- CURRENT CONDITIONS SHALL BE COVERED OR REMOVED 5. THE DIMENSIONS SHOWN OR DESCRIBED FOR LOCATING CONSTRUCTION SIGNS ARE NOMINAL. THE ACTUAL DIMENSIONS SHALL BE ADJUSTED TO BEST FIT LOCAL CONDITIONS AND PROVIDE MAXIMUM VISIBILITY.
- 6. IF TRAFFIC CONTROL DEVICES ARE NECESSARY FOR PROPER WARNING AND TRAFFIC CONTROL AFTER SUNSET, THEN AS A MINIMUM, TYPE "B" WARNING LIGHTS SHALL BE PLACED ON THE FIRST WARNING SIGN AND CHANNELIZING DRUM AND TYPE "A" REFLECTIVE SHEETING SHALL BE REQUIRED ON ALL SIGNS.
- 7. HAZARDOUS CONDITIONS ON OPEN ROADWAYS SUCH AS PAVEMENT DROP-OFFS IN EXCESS OF 2"; CONSTRUCTION MATERIALS, VEHICLES, OR EQUIPMENT STORED OR PLACED WITHIN THE ROADWAY RIGHT-OF-WAY; AND OPEN TRENCHES ACROSS OR NEAR THE ROADWAY SHALL NOT BE ALLOWED UNLESS THE CONTRACTOR IS ON SITE AND WORKING, AND PROPER TRAFFIC CONTROL MEASURES ARE BEING TAKEN- INCLUDING BARRICADES.
- 8. THE CONTRACTOR SHALL KEEP OPEN ROADWAYS CLEAN AND FREE OF CONSTRUCTION DEBRIS, DIRT, LOOSE GRAVEL OR OTHER MATERIAL THAT MAY CAUSE HAZARDOUS DRIVING CONDITIONS.
- 9. TRAFFIC CONTROL DEVICES SHALL MEET THE STANDARD MATERIAL AND INSTALLATION REQUIREMENTS SPECIFIED IN THE CURRENT EDITION OF THE AL.D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. 10. ROADWAYS AND DRIVEWAYS SHALL REMAIN OPEN DURING CONSTRUCTION.
- CHANNELIZING DEVICES SHALL BE PLACED AT 10' ON CENTER ALONG MINIMUM 20' RADII TO CHANNELIZE TRAFFIC INTO AND OUT OF INTERSECTING ROAD AND DRIVES WITHIN AREAS WHERE CHANNELIZING DEVICES ARE REQUIRED. TEMPORARY REGULATORY SIGNS SUCH AS STOP SIGNS AND YIELD SIGNS SHALL BE PLACED AS NECESSARY FOR PROPER TRAFFIC CONTROL IN ACCORDANCE WITH THE
- 11. CONTRACTOR SHALL UTILIZE FLAGMEN AND SIGNAGE AS NEEDED TO ASSURE SAFE ACCESS TO AND FROM THE VISITOR'S CENTER. 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SITE CONSTRUCTION TRAFFIC CONTROL PLAN TO BE APPROVED BY THE CITY OF HUNTSVILLE AND REDSTONE ARSENAL PRIOR TO CONSTRUCTION. THE SITE CONSTRUCTION TRAFFIC CONTROL PLAN SHALL TAKE INTO ACCOUNT THE ENTERING AND EXITING OF CONSTRUCTION TRAFFIC ONTO THE ROADWAY AND THE IMPACT TO THE FLOW OF TRAFFIC. THIS PLAN SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD. THIS SITE CONSTRUCTION TRAFFIC CONTROL PLAN SHALL BE IN ADDITION TO ANY TRAFFIC LOGISTICS PLANS PROVIDED IN THIS PLAN SET FOR ROADWAY
- 13. CONTRACTOR SHALL PHASE TRAFFIC CONTROL PLAN AS NEEDED TO ALLOW CONTINUOUS ACCESS TO THE EXISTING VISITOR CENTER AND THE PACKAGE 1A, 1B, 1B-5, 1D, BUILDING RG1000, AND BUILDING RG1200 CONTRACTORS AS NEEDED TO PROTECT THE WORKERS AND TRAVELING PUBLIC.
- 14. EXISTING ROADWAYS SHALL BE KEPT FREE OF MUD, SEDIMENT, DEBRIS, ETC. AND SHALL BE CLEANED ON A REGULAR BASIS AS A MINIMUM DAILY.

- 1. THE OWNER WILL BE RESPONSIBLE FOR PROVIDING ITS COMPACTION TESTING. ADDITIONAL COMPACTION TESTING MAYBE REQUIRED AND WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 2. ALL TOPSOIL SHALL BE STRIPPED WITHIN THE PROPOSED LIMITS OF GRADING AND SHALL BE STOCKPILED ON THE REDSTONE GATEWAY IN AN APPROVED LOCATION FOR LATER USE DURING THIS PACKAGE TO RE-PLATE SLOPES, SHOULDERS, AND MEDIAN AREAS AS INDICATED ON THE PLANS. ALL EXCESS TOPSOIL SHALL BE HAULED OFFSITE. SEE SPECIFICATIONS FOR OFFSITE DISPOSAL AREA LOCATION.
- 3. SUBGRADE IN FILL AREAS SHALL BE PROOF ROLLED WITH A LOADED DUMP TRUCK AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING FILL. ANY AREAS SHOWING SIGNS OF PUMPING, RUTTING, OR ANY UNSUITABLE (ORGANIC, SOFT, WET, LOOSE) MATERIAL FOUND IN PLACE SHALL BE UNDERCUT AND REPLACED, OR MOISTURE CONDITIONED AND COMPACTED TO THE SPECIFIED DENSITY AND MOISTURE CONTENT LISTED BELOW.
- 4. ALL EXPOSED SUBGRADE IN CUT AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 12" AND RECOMPACTED TO THE SPECIFIED DENSITY AND MOISTURE CONTENT LISTED BELOW AND IN THE PROJECT SPECIFICATIONS.
- 5. THE PROJECT IS UNCLASSIFIED TO -12" BELOW SUBGRADE ELEVATION IN CUT AREAS. 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE SUBGRADE AFTER IT HAS BEEN INITIALLY PREPPED, IF DAMAGED DUE TO INCLEMENT WEATHER OR CONSTRUCTION TRAFFIC.
- 7. FILL MATERIAL SHALL HAVE THE FOLLOWING PROPERTIES: VIRTUALLY FREE OF ORGANICS LESS THAN 5%, NO ROCK FRAGMENTS GREATER THAN 4" WITHIN 4' OF FINISH GRADE, LIQUID LIMIT NOT EXCEEDING 50, PLASTICITY INDEX NOT EXCEEDING 30, MINIMUM STANDARD PROCTOR (ASTM D-698) OF 95 PCF, COMPACTED TO 98% IN PAVED AREAS, PLACED IN 8" TO 10" THICK LOOSE LIFTS, AND WITHIN ±2.0% OF OPTIMUM MOISTURE CONTENT. NOTE THAT SOILS WITHIN 1' OF PAVED AREAS SHALL BE CL/CH SOILS AND HAVE A MAXIMUM LIQUID LIMIT NOT EXCEEDING 50, AND A MAXIMUM PLASTICITY INDEX NOT EXCEEDING 30, COMPACTED TO 98% AND WITHIN ±2.0% OF OPTIMUM MOISTURE CONTENT. REFER TO SUPPLEMENTAL SPECIFICATIONS EARTHWORK FOR ADDITIONAL INFORMATION. 8. COMPACTION TESTS WILL BE TAKEN AT THE RECOMMENDATION OF THE ON-SITE GEOTECHNICAL ENGINEER, BUT AT A MINIMUM EVERY 5,000 SQUARE FEET OF AREA PER 8" LIFT IN PAVING AREAS.
- 9. COMPACTION WITHIN LIMITED SPACES (I.E. MANHOLES, INLETS, UTILITY TRENCHES) SHOULD BE BACKFILLED AND COMPACTED SYSTEMATICALLY, AT THE DIRECTION OF THE OWNER'S ONSITE REPRESENTATIVE. STONE BACKFILL SHALL BE INSTALLED IN 8" LOOSE LIFTS AND COMPACTED TO 95% STANDARD PROCTOR PER CITY OF HUNTSVILLE STANDARD SPECIFICATIONS SECTION 105 AND 107 AS MODIFIED IN THE SUPPLEMENT TO GENERAL REQUIREMENTS.
- 10. CLEARING LIMITS SHALL BE 5' OUTSIDE OF ALL PROPOSED GRADED AREAS OR NOT BEYOND THE PROPERTY LINES OR CLEARING LIMITS WHICHEVER IS LESS. 11. NO GRADING OFF-SITE OR IN ALDOT DENIED ACCESS RIGHT-OF-WAY WITHOUT PROPER APPROVALS AND PRIOR NOTIFICATION.
- 12. COORDINATE THE SEQUENCING OF ALL GRADING OPERATIONS WITH THE EROSION CONTROL PLAN AND OTHER ONGOING PROJECTS. 13. PROPOSED GRADES INDICATED ON THIS PLAN ARE TO FINISH GRADE. THE CONTRACTOR SHALL MAKE SUBGRADE ADJUSTMENTS
- FOR TOPSOIL, PAVING, ETC. 14. FILL SLOPES SHOULD BE BENCHED INTO THE EXISTING SLOPES AND SHOULD BE COORDINATED WITH THE OWNER FOR DEPTH OF
- BENCH INTO THE SLOPE. 15. A GEOTECHNICAL REPORT HAS BEEN PREPARED BY BUILDING AND EARTH SCIENCES, INC. PROJECT NUMBER HV10019 DATED
- AUGUST 5, 2011 AND IS AVAILABLE FOR INFORMATIONAL PURPOSES. 16. UNSUITABLE MATERIAL REFERS TO MATERIAL THAT IS NOT SUITABLE FOR PAVEMENT SUPPORT FOR REASONS ASSOCIATED WITH MATERIAL PROPERTIES, SUCH AS HIGHLY PLASTIC SOILS, "FAT" CLAYS, ORGANICS EXCEEDING 5%, AND OLD FILL. MATERIAL WHICH IS OTHERWISE SUITABLE, BUT ABOVE THE OPTIMUM MOISTURE AND REQUIRES MOISTURE CONDITIONING PRIOR TO USE AS STRUCTURAL
- FILL SHALL NOT BE CONSIDERED AS "UNSUITABLE". NOTE ADDITIVE AND DEDUCTIVE UNIT PRICES ARE BEING PROVIDED TO HANDLE CHANGING FIELD CONDITIONS DURING CONSTRUCTION AS NEEDED. 17. DEWATERING SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. PREVENT SURFACE WATER AND GROUND WATER
- FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA. PROTECT SUBGRADES FROM SOFTENING, UNDERMINING, WASHOUT, AND DAMAGE BY RAIN OR WATER ACCUMULATION. REROUTE SURFACE WATER RUNOFF AWAY FROM EXCAVATED AREAS. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. DO NOT USE EXCAVATED TRENCHES AS TEMPORARY DRAINAGE DITCHES. INSTALL A DEWATERING SYSTEM TO KEEP SUBGRADES DRY AND CONVEY GROUND WATER AWAY FROM EXCAVATIONS. MAINTAIN UNTIL DEWATERING IS NO LONGER REQUIRED. IF GROUNDWATER DEWATERING IS REQUIRED, CONTRACTOR IS TO OBTAIN ANY PERMITS AS MAY BE REQUIRED PRIOR TO DISCHARGE OF EFFLUENT FROM

AHD-17

PROJECT CONTROL POINTS (NE)

TP-2 1,529,198.25

NAVD 88, USING 731.8 AS ELEVATION

ALABAMA EAST ZONE CONTROL: GTAC, PID DG5771

GRID NORTH

1.530.461.19

1.530.739.43

1,528,778.40

NAV (83) CORS - 34°42'39.82619(N) - 086°39'12.28546(W)

- 1. THE CONTRACTOR SHALL NOTIFY REDSTONE ARSENAL, GARY SHELTON (256) 876-5150, AT LEAST 48 HOURS IN ADVANCE OF WORK NEAR NEC COMMUNICATIONS LINES.
- 2. REDSTONE HAS THE RIGHT FOR INGRESS AND EGRESS THROUGH THE CONSTRUCTION SITE FOR MAINTENANCE ON THEIR LINES. THE CONTRACTOR SHALL WORK WITH REDSTONE TO ENSURE ACCESS TO THEIR FACILITIES.

GRID EAST

404.038.30

403.720.37

404,155.65

404,178.52

ELEVATION

655.94

662.68

638.64

640.82

DESCRIPTION

ALDOT HIGHWAY MONUMENT NO. 17

ALDOT HIGHWAY MONUMENT NO. 16

MAG NAIL & GALVANIZED SHINER

MAG NAIL & GALVANIZED SHINER

#### STORM DRAINAGE NOTES

EROSION CONTROL NOTES:

- 1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL STORM PIPE MATERIALS TO THE OWNER AND RECEIVE APPROVAL PRIOR TO INSTALLATION AND/OR FABRICATION.
- 2. ALL PROPOSED STORM INLETS (GRATES, CURB, YARD, AREA DRAINS) ARE TO BE LOCATED AT THE LOW POINTS. GRADING SHALL BE TO DIRECT RUNOFF TO THESE INLETS. NOTIFY THE OWNER OF ANY DISCREPANCIES.
- STORM DRAINAGE SYSTEMS SHALL BE CONSTRUCTED FROM DOWNSTREAM TO UPSTREAM. VERIFY ALL PIPE SLOPES, INVERTS, AND POINTS OF CONNECTION PRIOR TO CONSTRUCTION. NOTIFY THE OWNER OF ANY DISCREPANCIES.
- 4. THE CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED STORM PIPE GRADES AND POINTS OF CONNECTION PRIOR TO INSTALLATION. THE OWNER SHALL BE NOTIFIED OF ANY DEVIATIONS PRIOR TO OR DURING CONSTRUCTION. 5. PROPOSED STORM PIPES SHALL BE BEDDED IN 4" OF CRUSHED AGGREGATE PER CITY OF HUNTSVILLE DR-166. STORM PIPES
- LOCATED IN PAVED AREAS AND 5' BEYOND THE BACK OF CURB SHALL BE BACKFILLED WITH #78 STONE UP TO SUBGRADE ELEVATION PER CITY OF HUNTSVILLE DR-166.
- 6. ALL RIP RAP SHALL BE CLASS 2 PER THE ALABAMA DEPT. OF TRANSPORTATION (ALDOT) STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED. 7. ALL STORM PIPES 18" AND GREATER SHALL BE CLASS 3 REINFORCED CONCRETE PIPE (RCP) PER CITY OF HUNTSVILLE STANDARD
- SPECIFICATIONS SECTION 527 AS MODIFIED IN THE SUPPLEMENT TO GENERAL REQUIREMENTS. 8. ALL STORM MANHOLES SHALL BE APPROVED CONE, RISER, AND BASE SECTIONS WITH GASKETED JOINTS MEETING ALDOT SPECIAL DRAWING # MH-621-2 WITH CITY OF HUNTSVILLE RING AND COVER PER DR-129.
- 10. CONCRETE BOX CULVERTS SHALL BE EITHER PRE-CAST OR CAST-IN-PLACE TYPE CONSTRUCTION. PRE-CAST BOX CULVERTS SHALL BE DESIGNED TO MEET AASHTO HS-20 LOADING REQUIREMENTS, AASHTO M273 (C850), AASHTO M259 (C789), ASTM C1433, AND THE CITY OF HUNTSVILLE STANDARD SPECIFICATIONS SECTION 523 FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS AS MODIFIED IN THE SUPPLEMENT TO GENERAL REQUIREMENTS. CAST-IN-PLACE BOX CULVERTS SHALL BE PER THE ALDOT SPECIAL DRAWINGS PROVIDED MEETING AASHTO HS-20 LOADING CONDITIONS AND THE CITY OF HUNTSVILLE STANDARD SPECIFICATIONS SECTION 523 FOR

9. ALL SLOPE PAVED HEADWALLS SHALL BE PER CITY OF HUNTSVILLE DR-152A THROUGH DR-152D.

CONSTRUCTION OF PUBLIC IMPROVEMENTS AS MODIFIED IN THE SUPPLEMENT TO GENERAL REQUIREMENTS. 11. ALL SINGLE AND DOUBLE WING CURB INLETS SHALL BE PER CITY OF HUNTSVILLE DR-120A THROUGH DR-120C. 12. ALL YARD INLETS SHALL BE PRECAST INLET BOXES 3-1" x 3-1" OR 4'-2" x 4'-2" DEPENDING ON MAXIMUM PIPE DEFLECTIONS. YARD

#### INLET TOP TO BE PRECAST WITH A RING AND COVER ACCESS PROVIDED THROUGH THE TOP. 13. CONTRACTOR TO PROVIDE "RED-LINED" AS-BUILT DRAWINGS ON STORM PIPING AND STORMWATER DETENTION.

- 1. EXISTING EROSION CONTROL MEASURES INSTALLED IN PACKAGE 1A AND 1B. CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING THESE MEASURES LOCATED WITHIN THEIR WORK AREA ONLY.
- ANY TEMPORARY ACCESS ROADS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR RELATED TO THEIR OWN SCOPE OF WORK. 3. SITE EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS, CODES, AND REGULATIONS.
- 4. LW REDSTONE, LLC HAS OBTAINED A "NOTICE OF REGISTRATION"(NOR) FROM ADEM #ALR16EFJM (EXPIRES 8/23/2011). THE OWNER SHALL BE RESPONSIBLE FOR ALL ADEM REQUIRED MONITORING, INSPECTIONS, ETC. TO ENSURE THAT THE SITE IS AT ALL TIMES IN ACCORDANCE WITH ADEM RULES & REGULATIONS. DAILY DOCUMENTATION OF INSPECTIONS BY A Q.C.I. OR Q.C.P. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND MAINTAINED BY THE CONTRACTOR ON-SITE AND PROVIDED TO THE OWNER UPON REQUEST. ANY AND ALL FEES, FINES, ETC., SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING THE CONSTRUCTION PROCESS AND UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL EROSION CONTROL INSTALLATION AND MAINTENANCE SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT NO ADDITIONAL COST TO THE OWNER 6. EROSION CONTROL DEVICES SHOWN ON THESE PLANS ARE A MINIMUM. ADDITIONAL DEVICES SHALL BE INSTALLED AS REQUIRED TO PREVENT SILTATION, EROSION AND OTHER DEGRADATION OR POLLUTION TO THE SITE OR ADJACENT PROPERTIES, STREAMS,
- DITCHES, AND PUBLIC ROADWAYS. 7. EROSION CONTROL DEVICES SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING DEVICES: SILT FENCING, BRUSH BERMS, SEDIMENT BASINS, DETENTION PONDS, STRAW WATTLES, CHECK DAMS, FILTER BERMS, JUTE MATTING, VEGETATIVE FILTER STRIPS,
- TURF REINFORCEMENT MAT, DIVERSION BERMS, POLYACRYLAMIDE, FLOC BLOCKS, ETC. 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES IN GOOD OPERATING CONDITION DURING ALL LAND DISTURBING ACTIVITIES. THIS RESPONSIBILITY SHALL INCLUDE THE CLEANUP AND/OR REPAIRS TO THE DEVICES AT
- NO ADDITIONAL COST TO THE OWNER. 9. EROSION CONTROL DEVICES SHALL BE MONITORED AND MAINTAINED UNTIL THE SITE HAS BEEN PERMANENTLY STABILIZED AND AFTER EACH RAINFALL GREATER THAN 0.5 INCHES IN A 24 HOUR PERIOD. ANY WIND GUSTS GREATER THAN 25 MPH. AND ANY
- SUSTAINED WINDS GREATER THAN 20 MPH IN A 24 HOUR PERIOD. 10. AFTER ALL LAND DISTURBANCE ACTIVITIES HAVE CEASED AND AFTER ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED, THE EROSION CONTROL DEVICES SHALL BE REMOVED BY THE CONTRACTOR AND THE AREA CLEANED AND DRESSED FOR EACH CONTRACTOR'S WORK AREA. CONTRACTOR SHALL INSTALL, MAINTAIN, AND REMOVE ANY EROSION CONTROL MEASURES UNTIL
- AREA IS STABILIZED IN WORK AREA BY CONTRACTOR THAT INSTALLED THE EROSION CONTROL MEASURE. 11. DEWATERING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR THEIR SCOPE OF WORK. DEWATERING OPERATIONS MAY NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION OF THE SITE OR POLLUTION TO ADJACENT PROPERTIES, STREAMS,
- DITCHES, OR PUBLIC ROADWAYS. 12. ALL LAND DISTURBANCE ACTIVITIES SHALL BE CONDUCTED IN A LOGICAL SEQUENCE TO MINIMIZE THE EXPOSURE OF BARE AREAS AT ANY ONE TIME.
- 13. ALL DISTURBED AREAS LEFT INACTIVE FOR MORE THAN 13 DAYS SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH ALDOT SPECIFICATIONS SECTION 652 AND 656 AND CITY OF HUNTSVILLE STANDARD SPECIFICATIONS SECTION 653 AND 659. COORDINATE PERMANENT GRASSING WITH LANDSCAPE PLAN.
- 14. ALL DITCHES AND FILL/CUT SIDE SLOPES SHALL RECEIVE ALDOT SEED AND MULCH PER NOTE #13 ABOVE. COORDINATE WITH LANDSCAPE PLANS FOR SOD AREAS. ALL FLAT/PAD AREAS SHALL RECEIVE WILDFLOWER MIX PER THE PROJECT SPECIFICATIONS -SUPPLEMENTAL SPECIFICATIONS LANDSCAPE, 2.4 F
- 15. ALL GRADED AREAS SHALL RECEIVE A MINIMUM OF 4 INCHES OF TOPSOIL AND PERMANENT GRASSING UNLESS OTHERWISE INDICATED. PLANTING BEDS SHALL RECEIVE A MINIMUM OF 6" OF TOPSOIL.
- 16. PRIOR TO SITE CLEARING, ALL PERIMETER SILT FENCING, BRUSH BERMS, ETC. AND GRAVELED ACCESS DRIVES SHALL BE INSTALLED. THE OWNER WILL INSPECT AND APPROVE THE INSTALLATION OF THESE MEASURES PRIOR TO RELEASING SITE WORK CONSTRUCTION.
- 17. ALL EXISTING STREAMS, DITCHES, ETC. SHALL BE PROTECTED FROM SEDIMENTS AND SILTS BY SILT FENCING, WATTLES, BRUSH BERMS, ETC. 18. WATTLES OR SILT FENCING SHALL BE INSTALLED AT ALL INLETS UPON THE COMPLETION OF EACH INLET AS INSTALLED.
- 19. RIP RAP SHALL BE PLACED AT EACH HEADWALL IMMEDIATELY FOLLOWING CONSTRUCTION OF EACH HEADWALL. 20. GEOTEXTILE SHALL BE PLACED ON ALL 2:1 SIDE SLOPES. GEOTEXTILE SHALL BE NORTH AMERICAN GREEN SC150 OR APPROVED EQUAL UNLESS OTHERWISE NOTED ON PLANS. ALL GEOTEXTILES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
- 21. GEOTEXTILE SHALL BE PLACED ON ALL 3:1 SIDE SLOPES. GEOTEXTILE SHALL BE NORTH AMERICAN GREEN S150 OR APPROVED EQUAL UNLESS OTHERWISE NOTED ON PLANS. ALL GEOTEXTILES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
- 22. GEOTEXTILE SHALL BE PLACED ON ALL DITCH BOTTOMS & TO THE TOP OF SLOPE ON EACH SIDE. GEOTEXTILE SHALL BE NORTH AMERICAN GREEN SC150 OR APPROVED EQUAL UNLESS OTHERWISE NOTED ON PLANS. ALL GEOTEXTILES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS
- 23. GEOTEXTILE IS NOT REQUIRED ON 4:1 AND FLATTER SLOPES.

LOCATION

I-565 R.O.W. 275' WEST OF CL RIDEOUT ROAD

I-565 R.O.W. 600' WEST OF CL RIDEOUT ROAD

177' NORTH OF CL GOSS ROAD & 113' WEST OF CL RIDEOUT ROAD

600' NORTH OF CL GOSS ROAD & 113' WEST OF CL RIDEOUT ROAD

#### **GRAVITY SANITARY SEWER NOTES:**

- 1. ALL GRAVITY SANITARY SEWER MAIN CONSTRUCTION SHALL BE PER THE CITY OF HUNTSVILLE ENGINEERING DEPARTMENT "DESIGN AND ACCEPTANCE MANUAL FOR SANITARY SEWERS" DATE MARCH 2011.
- 2. THE INTENT OF THE DRAWINGS IS THAT THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND TRANSPORTATION NECESSARY FOR THE PROPER EXECUTION OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ALL INCIDENTAL WORK NECESSARY TO COMPLETE THE PROJECT IN AN ACCEPTABLE MANNER, READY FOR USE, OCCUPANCY OR
- 3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL GRAVITY SANITARY SEWER MATERIALS TO THE OWNER AND RECEIVE APPROVAL PRIOR TO INSTALLATION AND/OR FABRICATION.
- 4. EFFORTS HAVE BEEN MADE TO INDICATE LOCATIONS OF EXISTING AND/OR PLANNED STRUCTURES, PIPING, UTILITIES, AND TOPOGRAPHY. HOWEVER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXACT MEASUREMENTS AND LOCATIONS OF ALL EXISTING ITEMS BEFORE INITIATING ANY CONSTRUCTION OPERATIONS. ANY EXISTING STRUCTURE, PIPING OR UTILITY DISTURBED OR DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION OPERATIONS SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER AND/OR ENGINEER. SUFFICIENT ADVANCE COORDINATION OF DISRUPTION WITH THE OWNER OF ANY FACILITY IS
- THE TOTAL RESPONSIBILITY OF THE CONTRACTOR. 5. ALL BURIED PIPES SHALL HAVE A MINIMUM OF 3'-0" COVER AS MEASURED VERTICALLY FROM FINISHED GRADE TO THE TOP OF PIPE, UNLESS OTHERWISE NOTED.
- 6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO WORK ALL APPLICABLE DRAWINGS AND THE APPROPRIATE SPECIFICATIONS AS A UNIT. ANY OMISSIONS, DELETIONS, OR CONFLICTS ARISING AS A RESULT OF FAILURE TO INCORPORATE ALL DRAWINGS AND SPECIFICATIONS THAT APPLY SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER AND/OR ENGINEER. 7. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR TVI, VACUUM TESTING MANHOLES AND AIR TESTING SEWER LINES. A 72-HOUR NOTICE IS REQUIRED PRIOR TO TESTING. REPRESENTATIVES FROM BOTH THE CITY ENGINEERING OFFICE AND WATER
- POLLUTION CONTROL SHALL BE PRESENT TO VERIFY TESTING RESULTS. 8. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A COMPLETE SET OF RECORD DRAWINGS (AS-BUILTS) IN RED-LINED HARDCOPY FORMAT UPON COMPLETION OF CONSTRUCTION. IN ADDITION, THE RECORD DRAWINGS SHALL SHOW FINAL VERTICAL AND HORIZONTAL ALIGNMENT OF ALL BURIED UTILITIES ADDED OR MOVED AS A RESULT OF CONSTRUCTION, THEY SHALL INCLUDE ACTUAL FIELD ANGLES BETWEEN LINES, ALL SERVICE LINES AND TEE LOCATIONS, ALL VALVE VAULTS AND VALVE BOXES, STUBOUTS, AND LINES AND SHALL REFLECT ALL ALIGNMENT AND GRADE CHANGES FROM THE DESIGN DRAWINGS MADE DURING CONSTRUCTION. RECORD DRAWINGS MUST BE COMPLETED AND SUBMITTED PRIOR TO ACCEPTANCE OF THE SEWERS INTO THE PUBLIC SYSTEM AND ANY CONNECTIONS BEING MADE THERETO. CERTIFIED DIGITAL AS-BUILTS WILL BE PROVIDED TO THE OWNER BY "OTHERS" UPON
- ACCEPTANCE OF THE CONTRACTOR'S RECORD DRAWINGS. THE ENGINEER WILL PROVIDE GEOTECHNICAL INFORMATION SUCH AS BORINGS, SOIL TESTS, ETC UPON WRITTEN REQUEST 10. ALL CONCRETE, ASPHALT DRIVEWAYS AND OTHER ROAD ACCESSES, SHALL BE SAWCUT AND REPAIRED IN AS GOOD OR BETTER CONDITION AS BEFORE CONSTRUCTION. PROPERTY OWNERS SHALL HAVE ACCESS TO PROPERTY AT ALL TIMES DURING
- 11. CONTRACTOR SHALL SUPPLY AND INSTALL SERVICE CONNECTIONS AND FLEX CONNECTIONS IN MANHOLES AT ELEVATIONS AND
- DEFLECTIONS AS NOTED ON PLANS FOR ALL SERVICE LATERALS SHOWN. 12. SERVICE LATERALS AND STUBOUTS SHALL BE EXTENDED TO PROPERTY OR EASEMENT LINES AS SHOWN ON PLANS.
- 13. SEED, FERTILIZE, AND MULCH ALL DISTURBED AREAS DURING CONSTRUCTION. 14. CONTRACTOR SHALL MAINTAIN A 15' MINIMUM EXCAVATION CLEARANCE AT ALL TRANSMISSION LINES TOWER SUPPORTS AND DOWN GUY ANCHORS.
- 15. CONTRACTOR SHALL COORDINATE IN ADVANCE AND DURING CONSTRUCTION OPERATIONS WITH THE OWNER OF ANY FIBER OPTIC COMMUNICATION CABLES IN THE AREAS WHERE THESE UTILITIES MAY EXIST.
- 16. TRAFFIC CONTROL SHALL BE MAINTAINED PER THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION. 17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH NPDES STORMWATER PERMITS DURING ENTIRE CONSTRUCTING PERIOD. A COPY OF THE ADEM PERMIT SHALL MAINTAINED ON SITE AL ALL TIMES.
- 18. ALL GRAVITY SANITARY SEWER MAINS SHALL BE WRAPPED IN POLYETHYLENE WRAP PER SECTION 4.5.2 OF THE CITY OF HUNTSVILLE DESIGN AND ACCEPTANCE MANUAL FOR SANITARY SEWERS DATED MARCH 2011. 19. ALL GRAVITY SANITARY SEWER MAINS SHALL BE CEMENT MORTAR LINED WITH A BITUMINOUS SEAL COAT PER SECTION 4.5.2 OF
- THE CITY OF HUNTSVILLE DESIGN AND ACCEPTANCE MANUAL FOR SANITARY SEWERS DATED MARCH 2011. 20. ALL GRAVITY SANITARY SEWER MAINS SHALL BE BEDDED PER AWWA C150, TYPE 5 AND PER THE CITY OF HUNTSVILLE DESIGN AND ACCEPTANCE MANUAL FOR SANITARY SEWERS DATED MARCH 2011.

- 1. CONTRACTOR TO COORDINATE WITH OWNER PRIOR TO ANY UTILITY BEING DEMOLISHED REGARDING ITEMS TO BE SALVAGED, RECYCLED, AND REUSED. CONTRACTOR SHALL REMOVE ITEMS TO BE SALVAGED WITH EXTREME CAUTION TO PREVENT DAMAGE.
- CONTRACTOR SHALL TURN ALL SALVAGED UTILITY ITEMS OVER TO OWNER. 2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL UTILITY INFRASTRUCTURE MATERIALS TO THE OWNER AND RECEIVE
- APPROVAL PRIOR TO INSTALLATION AND/OR FABRICATION. 3. UTILITY TRENCHES SHALL BE BACKFILLED WITH COMPACTED FILL PLACED IN 8" LOOSE LIFTS. FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR AND OPTIMUM MOISTURE CONTENT WITHIN ±2.0% PER CITY OF HUNTSVILLE STANDARD SPECIFICATIONS SECTION
- 105 AND 107 AS MODIFIED IN THE SUPPLEMENT TO GENERAL REQUIREMENTS. 4. WHEN INSTALLING UTILITIES IN EXISTING PAVED AREAS, ROADWAYS, OR IN AREAS WHERE SOILS ARE CONSIDERED UNSUITABLE FOR BEDDING OR BACKFILLING. UTILITY TRENCHES SHALL BE BACKFILLED FULL DEPTH WITH #78 STONE PER CITY OF HUNTSVILLE
- 5. REFER TO HUNTSVILLE UTILITIES WATER DEPARTMENT FACILITIES SPECIFICATIONS DATED 2008 FOR ALL WATER SYSTEMS. HUNTSVILLE UTILITIES WATER MAIN SHALL HAVE HUNTSVILLE UTILITIES MARKER TAPE INSTALLED 2' ABOVE THE PIPE AND THE REDSTONE ARSENAL WATER MAIN RELOCATION SHALL HAVE REDSTONE MARKER TAPE INSTALLED 2' ABOVE THE PIPE. THESE WATER MAINS SHALL HAVE A MINIMUM OF 5' C.T.C. SEPARATION.
- 6. REFER TO HUNTSVILLE UTILITIES ELECTRICAL DEPARTMENT GENERAL SPECIFICATIONS FOR INSTALLATION OF UNDERGROUND UTILITIES DATED OCTOBER 2008 FOR ALL ELECTRICAL SYSTEMS.
- 7. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE WITH HUNTSVILLE UTILITIES ON THE GAS INSTALLATION WORK AND SCHEDULE ALONG REDSTONE GATEWAY.
- 8. THE CONTRACTOR SHALL CONTACT TRENT HALL WITH HUNTSVILLE UTILITIES POWER AT (256) 535-1306 OR (256) 652-8620 24 HOURS PRIOR TO THE CONSTRUCTION OF THE ELECTRICAL PRIMARY TO SET UP AN ON-SITE JOB MEETING. STREET LIGHT INFRASTRUCTURE WILL BE INSPECTED BY THE OWNER'S PROJECT MANAGER.

# **UTILITY CONTACTS:**

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Engineers

302-10-002A

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0 **M**E G E O 

